

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-319067

(43)Date of publication of application : 21.11.2000

(51)Int.Cl.

C04B 35/52
H01M 8/02

(21)Application number : 11-124070

(71)Applicant : MITSUBISHI CHEMICALS CORP

(22)Date of filing : 30.04.1999

(72)Inventor : KAWAMATA YUTAKA
TAKAHASHI KUNIMASA

(54) CARBON/GRAPHITE COMPOSITE MOLDING

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a composite molding useful for a separator plate of a solid high polymer type and a phosphate type fuel cell by molding, precisely working and carbonizing a fine particle mixture consisting essentially of a carboneaceous carbon compound fine particle having self-sintering property and a graphite carbon fine particle.

SOLUTION: The homogeneously mixed powder is obtained by drying, dehydrating and stirring to mix the fine particle consisting essentially of 10-50 pts.wt. carboneaceous carbon compound having self-sintering property at the time of carbonizing and $\geq 10 \mu\text{m}$ average particle diameter and 90-50 pts.wt. graphite carbon fine particle having 10-70 μm average particle diameter. An aq. solution containing a particle mutual bonding additive (polyethylene glycol) selected from water soluble compounds having adhesive property is added into the mixed powder and mixed and granulated to form a granulated body having $\leq 0.5 \text{ mm}$ max. particle diameter and molded by a molding machine such as a uniaxial press. The carbon/graphite combined molding is produced by precisely machining the resultant green molding into a high accuracy complicated shape and firing at 1100-1800°C under a non-oxygen atmosphere to carbonize.